INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

February 24, 2004

TO: Interested Parties / Applicant

RE: United States Gypsum Company / 101-18012-00001

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER.dot 9/16/03

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February 24, 2004

Mr. John E. Jones
United States Gypsum Company
P.O. Box 1377
Shoals, IN 47581-1377

Re: **101-18012**
Significant Source Modification to:
Part 70 Operating Permit No.: **T 101-7691-00001**

Dear Mr. Jones:

United States Gypsum Company was issued Part 70 Operating Permit **T 101-7691-00001** on May 24, 1999 for a stationary gypsum mining operation and gypsum wallboard and plaster products manufacturing plant. An application to modify the source was received on September 23, 2003. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

(ttt) Two (2) gypsum lay-in panel (GLIP) saws, with a maximum throughput of 28,800 square feet per hour, with particulate matter emissions controlled by one (1) 10,500 cubic feet per minute baghouse, identified as emissions point 55, and exhausting to one (1) stack, identified as S-59.

Please note that the two (2) gypsum lay-in panel (GLIP) saws are existing at the source. A new baghouse is being constructed, which will allow the throughput to increase from 7,000 square feet to 28,800 square feet per hour.

The following units are being removed from the source:

(ttt) Two (2) kerfing saws, with a maximum throughput of 10,000 square feet per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 54, and exhausting to one (1) stack, identified as S-58.

(yyy) One (1) ball mill #2, with a maximum throughput of 0.15 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 38, and exhausting to one (1) stack, identified as S-38.

(zzz) One (1) ball mill #3, with a maximum throughput of 0.38 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 39, and exhausting to one (1) stack, identified as S-39.

(aaaa) One (1) paper fiber hammermill, with a maximum throughput of 0.065 tons per hour, with particulate matter emissions controlled by two (2) cyclones, identified as emissions point 45, and exhausting to one (1) stack, identified as S-49.

The modification also consists of changes to the PSD emission limits on emissions points 55 and 14,

to ensure compliance with 326 IAC 2-2 (PSD).

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

This significant source modification authorizes construction of the new emission units. Operating conditions shall be incorporated into the Part 70 Operating Permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter contact Craig J. Friederich, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395, ext. 19 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Original Signed by Paul Dubenetzky

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
CJF/MES
cc: File - Martin County
Martin County Health Department
Southwest Regional Office
Air Compliance Section Inspector - Gene Kelso
Compliance Branch - Lynetta Brown-Glover
Administrative and Development
Technical Support and Modeling - Michele Boner

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Commissioner

PART 70 OPERATING PERMIT
OFFICE OF AIR QUALITY

United States Gypsum Company
State Road 650
Shoals, Indiana 47581

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Third Significant Source Modification No.: 101-18012-00001	Conditions Affected: D.7.1, D.9.1, D.9.8 Sections Affected: A.2, D.9
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: February 24, 2004

and 47, and exhausting to five (5) stacks, identified as S-16, S-24, S-28, S-50, and S-51, respectively. Some portions of the conveyor system are controlled by partial or total enclosure and exhaust to associated processes or inside the building.

(fff) One (1) surge bin, with a maximum throughput of 55 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 15, and exhausting to one (1) stack, identified as S-15.

(ggg) Three (3) stucco storage bins, each with a maximum throughput of 30 tons per hour, with particulate matter emissions from each bin controlled by one (1) baghouse, identified as emissions points 21, 22 and 23, and each exhausting to one (1) stack, identified as S-21, S-22, and S-23, respectively.

(hhh) One (1) stucco storage bin, with a maximum throughput of 20 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 31, and exhausting to one (1) stack, identified as S-31.

(iii) One (1) stucco storage bin, with a maximum capacity of 1000 tons, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 53, and exhausting to one (1) stack, identified as S-57.

The following #1 wallboard production facilities:

(jjj) A conveying system, consisting of screw and belt conveyors and bucket elevators, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 46, and exhausting to one (1) stack, identified as S-50. Some portions of the conveying system are controlled by partial or total enclosure and exhaust to associated processes or inside the building.

(kkk) One (1) stucco storage bin, with a maximum throughput of 25 tons per hour, with particulate matter emissions controlled by vent filters, and exhausting inside the building.

(lll) One (1) ball mill #1, with a maximum throughput of 0.38 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 37, and exhausting to one (1) stack, identified as S-37.

(mmm) Five (5) dry additive feeders, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 35, and exhausting to one (1) stack, identified as S-35.

(nnn) One (1) dry additive feeder, with particulate matter emissions uncontrolled, and exhausting inside the building.

(ooo) One (1) paper fiber hammermill, with a maximum throughput of 0.065 tons per hour, with particulate matter emissions controlled by two (2) cyclones and one (1) baghouse, identified as emissions point 46, and exhausting to one (1) stack, identified as S-50.

(ppp) One (1) gypsum panel slurry mixer, with a maximum throughput of 46.5 tons per hour, and exhausting inside the building.

(qqq) One (1) forming belt, with a maximum throughput of 25,000 square feet per hour, and exhausting inside the building.

(rrr) One (1) natural gas or fuel oil-fired drying kiln, identified as emissions point 41, with a heat input capacity of 46.1 million Btu per hour, and exhausting to one (1) stack, identified as S-45. No. 2 fuel oil will also be used as a supplemental fuel.

(sss) One (1) end saw, with a maximum throughput of 46.5 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 33, and exhausting to one (1) stack, identified as S-33. During backup situations, particulate matter emissions are controlled by one (1) baghouse, identified as emissions point 34, and exhausted to one (1) stack, identified as S-34.

(ttt) Two (2) gypsum lay-in panel (GLIP) saws, with a maximum throughput of 28,800 square feet per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 55, and exhausting to one (1) stack, identified as S-59.

The following #2 wallboard production facilities:

(uuu) A conveying system, consisting of screw and belt conveyors and bucket elevators, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 46, and exhausting to one (1) stack, identified as S-50. Some portions of the conveying system are controlled by partial or total enclosure and exhaust to associated processes or inside the building.

(vvv) One (1) stucco storage silo, with a maximum throughput of 39 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 32, and exhausting to one (1) stack, identified as S-32.

(www) Five (5) dry additive feeders, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 27, and exhausting to one (1) stack, identified as S-27.

(xxx) One (1) gypsum panel slurry mixer, with a maximum throughput of 64.5 tons per hour, and exhausting inside the building.

(yyy) One (1) forming belt, with a maximum throughput of 72,000 square feet per hour, and exhausting inside the building.

(zzz) One (1) natural gas or fuel oil-fired drying kiln, identified as emissions point 42, with a heat input capacity of 72.3 million Btu per hour, and exhausting to one (1) stack, identified as S-46. No. 2 fuel oil will also be used as a supplemental fuel.

(aaaa) One (1) end saw, with a maximum throughput of 64.5 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 33, and exhausting to one (1) stack, identified as S-33. During backup situations, particulate matter emissions are controlled by one (1) baghouse, identified as emissions point 34, and exhausted to one (1) stack, identified as S-34.

The Dunnage machine facilities:

(bbbb) One (1) Dunnage machine with saws, with a maximum throughput of 55 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 50, and exhausting to (1) stack, identified as S-54.

The following wallboard waste reclamation facilities:

(cccc) A conveying system, consisting of belt and screw conveyors and bucket elevator, with particulate matter emissions controlled by partial or total enclosure, and exhausting to associated processes or inside the building.

(dddd) One (1) waste wallboard shredder, with a maximum throughput of 20 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 50, and exhausting directly to the atmosphere.

(eeee) One (1) vibrating screens system, with a maximum throughput of 20 tons per hour, with particulate matter emissions controlled by partial enclosure, and exhausting inside the building.

(ffff) One (1) waste surge bin, with a maximum capacity of 20 tons, with particulate matter emissions controlled by filters, and exhausting inside the building.

(gggg) One (1) synthetic gypsum and shredded wallboard storage bin, with a maximum capacity of 60 tons, with particulate matter emissions controlled by filters, and exhausting to inside the building.

(hhhh) One (1) natural gas or fuel oil-fired impact dryer mill, identified as the Williams Mill, with a maximum throughput of 40 tons per hour, with a heat input capacity of 40 million Btu per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 49, and exhausting to one (1) stack, identified as S-53.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.7.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) The particulate matter emissions from the plaster production facilities shall be limited as follows:

(1) PM emissions from tube mill/feed bin (S-14) shall not exceed 0.720 pounds per hour.

(2) PM emissions from conveyor points 17 and 25 (S-17 and S-25) shall each not exceed 0.10 pounds per hour.

(3) PM emissions from the stucco storage bins (S-18, S-19 and S-20) shall each not exceed 0.10 pounds per hour.

(4) PM emissions from the perlite ore conveyor point 29 (S-29) shall not exceed 0.47 pounds per hour.

(5) PM emissions from the perlite ore expander (S-47) shall not exceed 0.93 pounds per hour.

(6) PM emissions from the bulk sand bin (S-55) shall not exceed 0.23 pounds per hour.

(7) PM emissions from the bulk lime bin (S-56) shall not exceed 0.18 pounds per hour.

(8) PM emissions from the plaster mixer and packer (S-30) shall not exceed 2.10 pounds per hour.

Compliance with these limits make 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable. Compliance with these limitations shall also satisfy the requirements of 326 IAC 6-3.

(b) Pursuant to CP 101-4068, issued on January 27, 1995, the fuel oil usage for all facilities at the gypsum processing plant, including the perlite ore furnace, shall not exceed 3,000,000 gallons per 12 consecutive month period. In addition, the fuel oil shall not exceed three-tenths (0.3%) sulfur content by weight. Compliance with these limits make 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable. Compliance with these limits shall also satisfy the requirements of 326 IAC 7-1.1.

D.7.2 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the plaster production facilities shall not exceed 37 pounds per hour when operating at a process weight rate of 27 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

SECTION D.9 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

The following #1 wallboard production facilities:

(jjj) A conveying system, consisting of screw and belt conveyors and bucket elevators, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 46, and exhausting to one (1) stack, identified as S-50. Some portions of the conveying system are controlled by partial or total enclosure and exhaust to associated processes or inside the building.

(kkk) One (1) stucco storage bin, with a maximum throughput of 25 tons per hour, with particulate matter emissions controlled by vent filters, and exhausting inside the building.

(lll) One (1) ball mill #1, with a maximum throughput of 0.38 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 37, and exhausting to one (1) stack, identified as S-37.

(mmm) Five (5) dry additive feeders, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 35, and exhausting to one (1) stack, identified as S-35.

(nnn) One (1) dry additive feeder, with particulate matter emissions uncontrolled, and exhausting inside the building.

(ooo) One (1) paper fiber hammermill, with a maximum throughput of 0.065 tons per hour, with particulate matter emissions controlled by two (2) cyclones and one (1) baghouse, identified as emissions point 46, and exhausting to one (1) stack, identified as S-50.

(ppp) One (1) gypsum panel slurry mixer, with a maximum throughput of 46.5 tons per hour, and exhausting inside the building.

(qqq) One (1) forming belt, with a maximum throughput of 25,000 square feet per hour, and exhausting inside the building.

(rrr) One (1) natural gas or fuel oil-fired drying kiln, identified as emissions point 41, with a heat input capacity of 46.1 million Btu per hour, and exhausting to one (1) stack, identified as S-45. No. 2 fuel oil will also be used as a supplemental fuel.

(sss) One (1) end saw, with a maximum throughput of 46.5 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 33, and exhausting to one (1) stack, identified as S-33. During backup situations, particulate matter emissions are controlled by one (1) baghouse, identified as emissions point 34, and exhausted to one (1) stack, identified as S-34.

(ttt) Two (2) gypsum lay-in panel (GLIP) saws, with a maximum throughput of 28,800 square feet per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 55, and exhausting to one (1) stack, identified as S-59.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.9.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) The particulate matter emissions from the #1 wallboard production facilities shall be limited as follows:

(1) PM emissions from ball mill #1 (S-37) shall not exceed 0.06 pounds per hour.

(2) PM emissions from the end saws (S-33) shall not exceed 0.93 pounds per hour.

(3) PM emissions from the GLIP saws (S-59) shall not exceed 1.80 pounds per hour.

Compliance with these limits make 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable. Compliance with these limitations shall also satisfy the requirements of 326 IAC 6-3.

(b) Pursuant to CP 101-4068, issued on January 27, 1995, the fuel oil usage for all facilities at the gypsum processing plant, including the #1 drying kiln, shall not exceed 3,000,000 gallons per 12 consecutive month period. In addition, the fuel oil shall not exceed three-tenths (0.3%) sulfur content by weight. Compliance with these limits make 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable. Compliance with these limits shall also satisfy the requirements of 326 IAC 7-1.1.

D.9.2 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the #1 wallboard production facilities shall not exceed 44 pounds per hour when operating at a process weight rate of 46.5 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.9.3 Sulfur Dioxide (SO_2) [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitation), the SO_2 emissions from kiln #1 shall not exceed five-tenths (0.5) pound per million Btu.

D.9.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements

D.9.5 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test these facilities by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facilities are in compliance. If testing is required by IDEM, compliance with the PM and SO_2 limits specified in Conditions D.9.1, D.9.2 and D.9.3 shall be determined by performance test(s) conducted in accordance with Section C -

Performance Testing.

D.9.6 Sulfur Dioxide Emissions and Sulfur Content

Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed three-tenths percent (0.3%) by weight by:

(a) Providing vendor analysis of fuel delivered, if accompanied by a certification; or

(b) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(1) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(2) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

D.9.7 Particulate Matter (PM)

Pursuant to OP 51-03-85-0025, issued on June 8, 1981, the baghouses for PM control shall be in operation at all times when the stucco handling and storage facilities are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.9.8 Visible Emissions Notations

(a) Daily visible emission notations of the #1 wallboard additive stack exhausts (S-33, S-35, S-37, S-50, and S-59) shall be performed during normal daylight operations while in operation. Daily visible emission notations of the kiln exhaust (S-46) shall be performed during normal daylight operations while combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.9.9 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses (Pt. 33, 35, 37, 46, 54 and 55) used in conjunction with the #1 wallboard production facilities, at least once daily when the #1 wallboard production facilities are in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 0.5 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

SECTION D.10 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

The following #2 wallboard production facilities:

(uuu) A conveying system, consisting of screw and belt conveyors and bucket elevators, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 46, and exhausting to one (1) stack, identified as S-50. Some portions of the conveying system are controlled by partial or total enclosure and exhaust to associated processes or inside the building.

(vvv) One (1) stucco storage silo, with a maximum throughput of 39 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 32, and exhausting to one (1) stack, identified as S-32.

(www) Five (5) dry additive feeders, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 27, and exhausting to one (1) stack, identified as S-27.

(xxx) One (1) gypsum panel slurry mixer, with a maximum throughput of 64.5 tons per hour, and exhausting inside the building.

(yyy) One (1) forming belt, with a maximum throughput of 72,000 square feet per hour, and exhausting inside the building.

(zzz) One (1) natural gas or fuel oil-fired drying kiln, identified as emissions point 42, with a heat input capacity of 72.3 million Btu per hour, and exhausting to one (1) stack, identified as S-46. No. 2 fuel oil will also be used as a supplemental fuel.

(aaaa) One (1) end saw, with a maximum throughput of 64.5 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 33, and exhausting to one (1) stack, identified as S-33. During backup situations, particulate matter emissions are controlled by one (1) baghouse, identified as emissions point 34, and exhausted to one (1) stack, identified as S-34.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.10.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) The particulate matter emissions from the #2 wallboard production facilities shall be limited as follows:

(1) PM emissions from the #2 board silo (S-32) shall not exceed 0.35 pounds per hour.

(2) PM emissions from the dry additive feeders (S-27) shall not exceed 0.58

(3) PM emissions from the end saws (S-34) shall not exceed 0.93 pounds per hour.

Compliance with these limits make 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable. Compliance with these limitations shall also satisfy the requirements of 326 IAC 6-3.

D.10.6 Sulfur Dioxide Emissions and Sulfur Content

Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed three-tenths percent (0.3%) by weight by:

(a) Providing vendor analysis of fuel delivered, if accompanied by a certification; or

(b) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(1) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(2) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

D.10.7 Particulate Matter (PM)

Pursuant to OP 51-03-85-0025, issued on June 8, 1981, the baghouses for PM control shall be in operation at all times when the stucco handling and storage facilities are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.10.8 Visible Emissions Notations

(a) Daily visible emission notations of the #2 wallboard additive stack exhausts (S-27, S-32, and S-34) shall be performed during normal daylight operations while in operation. Daily visible emission notations of the kiln exhaust (S-47) shall be performed during normal daylight operations while combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.10.9 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses (Pts. 27, 32, and 34), used in conjunction with the #2 wallboard production facilities, at least once daily when the #2 wallboard production facilities are in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 0.5 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one

reading.

SECTION D.11 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

The Dunnage machine facilities:

(bbbb) One (1) Dunnage machine with saws, with a maximum throughput of 55 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 50, and exhausting to (1) stack, identified as S-54.

The following wallboard waste reclamation facilities:

(cccc) A conveying system, consisting of belt and screw conveyors and bucket elevator, with particulate matter emissions controlled by partial or total enclosure, and exhausting to associated processes or inside the building.

(dddd) One (1) waste wallboard shredder, with a maximum throughput of 20 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 50, and exhausting directly to the atmosphere.

(eeee) One (1) vibrating screens system, with a maximum throughput of 20 tons per hour, with particulate matter emissions controlled by partial enclosure, and exhausting inside the building.

(ffff) One (1) waste surge bin, with a maximum capacity of 20 tons, with particulate matter emissions controlled by filters, and exhausting inside the building.

(gggg) One (1) synthetic gypsum and shredded wallboard storage bin, with a maximum capacity of 60 tons, with particulate matter emissions controlled by filters, and exhausting to inside the building.

(hhhh) One (1) natural gas or fuel oil-fired impact dryer mill, identified as the Williams Mill, with a maximum throughput of 40 tons per hour, with a heat input capacity of 40 million Btu per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 49, and exhausting to one (1) stack, identified as S-53.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document for a Significant Source Modification to a Part 70 Operating Permit

Source Name:	**United States Gypsum Company**
Source Location:	**State Route 650, Shoals, Indiana 47581**
County:	**Martin**
SIC Code:	**3275 and 1499**
Operation Permit No.:	**T 101-7691-00001**
Significant Source Modification No.:	**101-18012-00001**
Permit Reviewer:	**Craig J. Friederich**

On January 14, 2004, the Office of Air Quality (OAQ) had a notice published in the Shoals News, Shoals, Indiana, stating that United States Gypsum Company had applied for a Significant Source Modification to a Part 70 Operating Permit to construct a new baghouse associated with emission point 55. The notice also stated that OAQ proposed to issue a Significant Source Modification and provided information on how the public could review the proposed Significant Source Modification and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this Significant Source Modification to a Part 70 Operating Permit should be issued as proposed.

Upon further review, the OAQ has decided to make the following changes to the Significant Source Modification to a Part 70 Operating Permit: The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded)**:

Change 1:

The cover page has been revised as follows to indicate Paul Dubenetzky is the Branch Chief and not the Assistant Commissioner:

Third Significant Source Modification No.: 101-18012-00001	Conditions Affected: D.7.1, D.9.1, D.9.8 Sections Affected: A.2, D.9
Issued by: Paul Dubenetzky, ~~Assistant Commissioner~~ **Branch Chief** Office of Air Quality	Issuance Date:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for Part 70
Significant Source and Significant Permit Modifications

Source Background and Description

Source Name:	**United States Gypsum Company**
Source Location:	**State Route 650, Shoals, Indiana 47581**
County:	**Martin**
SIC Code:	**3275 and 1499**
Operation Permit No.:	**T 101-7691-0001**
Operation Permit Issuance Date:	**May 24, 1999**
Significant Source Modification No.:	**101-18012-00001**
Significant Permit Modification No.:	**101-18106-00001**
Permit Reviewer:	**Craig J. Friederich**

The Office of Air Quality (OAQ) has reviewed a modification application from United States Gypsum Company relating to the construction and operation of a new baghouse, identified as emissions point 55. The construction of the new baghouse, which will replace the existing baghouse, identified as emissions point 55, will allow for an increase in throughput at the two (2) gypsum lay-in panel (GLIP) saws from 7,000 square feet per hour to 28,800 square feet per hour, as follows:

(a) Two (2) gypsum lay-in panel (GLIP) saws, with a maximum throughput of 28,800 square feet per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 55, and exhausting to one (1) stack, identified as S-59.

United States Gypsum Company is also removing the following equipment:

(b) Two (2) kerfing saws, with a maximum throughput of 10,000 square feet per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 54, and exhausting to one (1) stack, identified as S-58.

(c) One (1) ball mill #2, with a maximum throughput of 0.15 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 38, and exhausting to one (1) stack, identified as S-38.

(d) One (1) ball mill #3, with a maximum throughput of 0.38 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 39, and exhausting to one (1) stack, identified as S-39.

(e) One (1) paper fiber hammermill, with a maximum throughput of 0.065 tons per hour, with particulate matter emissions controlled by two (2) cyclones, identified as emissions point 45, and exhausting to one (1) stack, identified as S-49.

History

On September 23, 2003, United States Gypsum Company submitted an application to the OAQ requesting to replace the existing 3,100 cubic feet per minute baghouse controlling emissions point

55 with a 10,500 cubic feet per minute baghouse at their existing plant and an increase in capacity of emissions point 55 from 7,000 square feet per hour to 28,800 square feet per hour. United States Gypsum Company is also removing the two (2) kerfing saws controlled by a baghouse, identified as emissions point 54, as well as the one (1) ball mill #2, one (1) ball mill #3, and the one (1) paper fiber hammermill . United States Gypsum Company was issued a Part 70 permit on May 24, 1999. The potential to emit, after controls, from the modified emissions point 55 is 1.80 lbs/hr. Therefore, this will not meet the existing limit of 0.35 lbs/hr contained in the original Part 70 Operating Permit for emissions point 55. U.S. Gypsum has accepted a limit of 1.80 pounds of PM per hour at emissions point 55. The limited potential to emit PM from the 217 million British thermal units per hour of combustion at the source was 15.7 tons per year. However, using the most recent AP-42 emission factors, this limit is now equivalent to 10.6 tons per year. Therefore, the 10.6 tons per year limit on combustion, the new 1.80 pound per hour limit at emissions point 55, and all the other PM limits contained in the Part 70 Operating Permit, will limit the potential to emit PM from the entire source to less than two-hundred fifty (250) tons per year, as shown in the table below:

Point	Stack	Facility	Limit (lbs/hr)	Point	Stack	Facility	Limit (lbs/hr)
1	S-1	Kettle #1	1.52	28	S-28	“F” Belt Conveyor	0.58
2	S-2	Kettle #2	1.52	29	S-29	Perlite Ore Conveyor	0.47
3	S-3	Kettle #3	1.52	30	S-30	Plaster Packer	2.10
4	S-4	Kettle #4	1.52	31	S-31	Stucco Storage Bin	0.70
5	S-5	Kettle #5	3.27	32	S-32	#2 Board Silo	0.35
6	S-6	Hot Pit #1	0.58	33	S-33	#1 End Saw	0.93
7	S-7	Hot Pit #2	0.58	34	S-34	#2 End Saw	0.93
8	S-8	Hot Pit #3	0.58	35	S-35	NO LONGER USED	NA
9	S-9	Rock Dryer (West)	2.34	36	S-36	Mill LP Bin	0.35
10	S-10	Rock Dryer (East)	2.34	37	S-37	#1 Ball Mill	0.06
11	S-11	Raymond Mill #1 and #2	1.40	38	S-38	~~#2 Ball Mill~~	~~0.05~~
12	S-12	Raymond Mill #3 and #4	1.17	39	S-39	~~#3 Ball Mill~~	~~0.06~~
13	S-13	Glass Batch Screens	0.38	40	S-40	Mill Packers	0.58
14	S-14	Tube Mill	0.720	43	S-47	Perlite Ore Expander	0.93
15	S-15	Board Surge Bin	0.58	44	S-48	NO LONGER USED	NA
16	S-16	“B” Belt Conveyor	0.10	45	S-49	~~#2 Paper Fiber~~	~~0.70~~
17	S-17	“A” Belt Conveyor	0.10	46	S-50	Stucco Receiving	1.17
18	S-18	Stucco Storage Bin	0.10	47	S-51	Airveyor Inlet	0.18
19	S-19	Stucco Storage Bin	0.10	48	S-52	LP Fines Bin	0.21
20	S-20	Stucco Storage Bin	0.10	49	S-53	Williams Mill	9.35
21	S-21	Stucco Storage Bin	0.10	50	S-54	Dunnage Machine	1.87
22	S-22	Stucco Storage Bin	0.10	51	S-55	Bulk Sand Bin	0.23
23	S-23	Stucco Storage Bin	0.10	52	S-56	Bulk Lime Bin	0.18
24	S-24	“F” Belt Conveyor	0.10	53	S-57	Stucco Storage Bin	1.40
25	S-25	“D” Belt Conveyor	0.10	54	S-58	~~Kerfing Saws~~	~~0.72~~
26	S-26	LP Filter Box	0.18	55	S-59	GLIP Saws	1.80

Point	Stack	Facility	Limit (lbs/hr)	Point	Stack	Facility	Limit (lbs/hr)
		Two (2) Rock Ore Screens	0.147			Primary Crusher	0.29
		One (1) Crusher, throughput 110 TPH	1.10			Secondary Crusher	6.22
		One (1) Loading Station	0.02			Combustion	10.6 TPY
27	S-27	#2 PST System/Additives	0.58			**Total**	**246.7 TPY**

Pursuant to SSM 101-14710-00001, issued November 30, 2001, the source replaced the existing 1,250 cubic feet per minute baghouse controlling emissions point 14 with a 4,000 cubic feet per minute baghouse and an increase in capacity of emissions point 14 from 9.1 tons per hour to 10.0 tons per hour. The potential to emit PM and PM_{10} after controls of the baghouse controlling emissions point 14 is 3.15 tons per year. This will not meet the existing limit of 0.35 lbs/hr contained in the original Part 70 Operating Permit. This limit should have been revised in SSM 101-14710-00001 but was not. The source has accepted a limit of 0.720 pounds per hour, which is the controlled potential to emit. This will limit the total PM emissions from the entire source to less than two-hundred fifty (250) tons per year.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
Stack 59	Gypsum Lay in Panel Saws	10.0	2.00	10,500	Ambient

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on September 23, 2003, with additional information received November 24, 2003.

Emission Calculations

See page 1 of 1 of Appendix A of this document for detailed emissions calculations.

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA."

This table reflects the difference in PTE before controls of the proposed baghouse, at a grain loading of 20 gr/acf and an air flow of 10,500 CFM, and the proposed throughput of 28,800 square feet per hour, and the old baghouse at a grain loading of 20 gr/acf, an air flow of 3,100, and a capacity of 7,000 square feet per hour. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	**Potential To Emit** (tons/year)
PM	5,557
PM_{10}	5,557
SO_2	--
VOC	--
CO	--
NO_X	--

Justification for Modification

The Part 70 Operating Permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7.10.5(f)(4), because the potential to emit PM and PM_{10} due to the proposed modification exceeds 25.0 tons per year. The proposed operating conditions shall be incorporated into the Part 70 Operating Permit as a Significant Permit Modification (SPM 101-18106-00001) in accordance with 326 IAC 2-7-12(d)(1). The Significant Permit Modification will give the source approval to operate the proposed emission unit.

County Attainment Status

The source is located in Martin County.

Pollutant	**Status**
PM_{10}	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC

emissions are considered when evaluating the rule applicability relating to the ozone standards. Martin County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) Martin County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	**Emissions** (tons/year)
PM	less than 250
PM_{10}	less than 250
SO_2	64.5
VOC	3.26
CO	45.5
NO_X	167

Note: The source has an additional 71 tons per year of fugitive PM/PM_{10} that does not count toward major source definition.

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of two-hundred fifty (250) tons per year or more, and it is not one of the twenty-eight (28) listed source categories.

(b) These emissions are based upon the Technical Support Document for SSM 101-14710-00001.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	**PM**	**PM_{10}**	**SO_2**	**VOC**	**CO**	**NO_X**	**HAPs**

Proposed Modification	5.55	5.55	--	--	--	--	--
Entire Source (including this modification)	less than 250	less than 250	64.5	3.26	45.5	167	--
PSD Threshold Level	250	250	250	250	250	250	--

*Note: The potential to emit after the modification reflects the difference in PTE after controls of the proposed baghouse, at a grain loading of 20 gr/acf and an air flow of 10,500 CFM, and the proposed throughput of 28,800 square feet per hour, and the old baghouse at a grain loading of 20 gr/acf, an air flow of 3,100 cfm, and a capacity of 7,000 square feet per hour.

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD threshold levels. In addition, all existing and revised (emission point 14) PM limits will still apply to the entire source, to ensure that the potential to emit PM from the entire source is limited to less than two-hundred fifty (250) tons per year. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability

(a) This significant modification does not involve a pollutant-specific emissions unit with the potential to emit after control in an amount equal to or greater than 100 tons per year. Therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not applicable.

(b) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

(c) There are still no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR 61 and 40 CFR Part 63) applicable to this proposed modification.

(d) The requirements of Section 112(j) of the Clean Air Act (40 CFR Part 63.50 through 63.56) are not applicable to this source because the source is not a major source of hazardous air pollutant (HAP) emissions (i.e., the source does not have the potential to emit ten (10) tons per year or greater of a single HAP or twenty-five (25) tons per year or greater of a combination of HAPs).

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

Particulate matter (PM) emissions from emissions point 55 shall not exceed 1.80 pounds per hour. The particulate matter (PM) emissions from emissions point 14 shall not exceed 0.720 pounds per hour. These limits, combined with all other particulate matter emission limitations at the source, will limit the particulate emissions from the entire source to less than two-hundred fifty (250) tons per year. Therefore, this source will remain a minor source pursuant to the provisions of this rule.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to T 101-7691-00001, the particulate from the #1 wallboard production facilities, which

includes the two (2) gypsum lay-in panel (GLIP) saws, shall not exceed 44 pounds per hour when operating at a process weight rate of 46.5 tons per hour.

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

The two (2) gypsum lay-in panel (GLIP) saws will retain all applicable compliance monitoring conditions (visible emissions notations, parametric monitoring, baghouse inspections, and baghouse failure) as specified in the Part 70 Operating Permit.

These existing monitoring conditions are necessary because the baghouse for the two (2) gypsum lay-in panel (GLIP) saws of the #1 wallboard production facilities must operate properly to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70).

Proposed Changes

The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language appears in **bold**):

Sections A.2, D.9, and D.10 have been revised as follows. Please note that all subsequent equipment has been re-lettered in Sections D.10 and D.11 after the removal of the two (2) kerfing saws, the two (2) ball mills identified as #2 and #3, and the one (1) paper fiber hammermill.

Pursuant to SSM 101-14710-00001, issued November 30, 2001, the source replaced the existing 1,250 cubic feet per minute baghouse controlling emissions point 14 with a 4,000 cubic feet per minute baghouse and an increase in capacity of emissions point 14 from 9.1 tons per hour to 10.0 tons per

hour. The potential to emit PM and PM_{10} after controls of the baghouse controlling emissions point 14 is 3.15 tons per year, as a result the limit has been revised as the source has accepted a 0.720 pounds of PM per hour limit. This will limit the total PM emissions from the entire source to less than two-hundred fifty (250) tons per year. Therefore, Condition D.7.1 has been revised.

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

~~(ttt) Two (2) kerfing saws, with a maximum throughput of 10,000 square feet per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 54, and exhausting to one (1) stack, identified as S-58.~~

(~~uuu~~**ttt**)Two (2) gypsum lay-in panel (GLIP) saws, with a maximum throughput of ~~7,000~~ **28,800** square feet per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 55, and exhausting to one (1) stack, identified as S-59.

~~(xxx) One (1) ball mill #2, with a maximum throughput of 0.15 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 38, and exhausting to one (1) stack, identified as S-38.~~

~~(yyy) One (1) ball mill #3, with a maximum throughput of 0.38 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 39, and exhausting to one (1) stack, identified as S-39.~~

~~(aaaa) One (1) paper fiber hammermill, with a maximum throughput of 0.065 tons per hour, with particulate matter emissions controlled by two (2) cyclones, identified as emissions point 45, and exhausting to one (1) stack, identified as S-49.~~

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.7.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) The particulate matter emissions from the plaster production facilities shall be limited as follows:

(1) PM emissions from tube mill/feed bin (S-14) shall not exceed ~~0.35~~ **0.720** pounds per hour.

(2) PM emissions from conveyor points 17 and 25 (S-17 and S-25) shall each not exceed 0.10 pounds per hour.

(3) PM emissions from the stucco storage bins (S-18, S-19 and S-20) shall each not exceed 0.10 pounds per hour.

(4) PM emissions from the perlite ore conveyor point 29 (S-29) shall not exceed 0.47 pounds per hour.

(5) PM emissions from the perlite ore expander (S-47) shall not exceed 0.93 pounds per hour.

(6) PM emissions from the bulk sand bin (S-55) shall not exceed 0.23 pounds per hour.

(7) PM emissions from the bulk lime bin (S-56) shall not exceed 0.18 pounds per hour.

(8) PM emissions from the plaster mixer and packer (S-30) shall not exceed 2.10 pounds per hour.

Compliance with these limits make 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable. Compliance with these limitations shall also satisfy the requirements of 326 IAC 6-3.

SECTION D.9 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

The following #1 wallboard production facilities:

~~(ttt) Two (2) kerfing saws, with a maximum throughput of 10,000 square feet per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 54, and exhausting to one (1) stack, identified as S-58.~~

(~~uuu~~**ttt**) Two (2) gypsum lay-in panel (GLIP) saws, with a maximum throughput of ~~7,000~~ **28,800** square feet per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 55, and exhausting to one (1) stack, identified as S-59.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.9.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) The particulate matter emissions from the #1 wallboard production facilities shall be limited as follows:

(1) PM emissions from ball mill #1 (S-37) shall not exceed 0.06 pounds per hour.

(2) PM emissions from the end saws (S-33) shall not exceed 0.93 pounds per hour.

~~(3) PM emissions from the kerfing saws (S-58) shall not exceed 0.72 pounds per hour.~~

(~~4~~ **3**) PM emissions from the GLIP saws (S-59) shall not exceed ~~0.35~~ **1.80** pounds per hour.

Compliance with these limits make 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable. Compliance with these limitations shall also satisfy the requirements of 326 IAC 6-3.

D.9.8 Visible Emissions Notations

(a) Daily visible emission notations of the #1 wallboard additive stack exhausts (S-33, S-35, S-37, S-50, ~~S-58~~ and S-59) shall be performed during normal daylight operations while in operation. Daily visible emission notations of the kiln exhaust (S-46) shall be performed during normal daylight operations while combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.

SECTION D.10 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

The following #2 wallboard production facilities:

(www) A conveying system, consisting of screw and belt conveyors and bucket elevators, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 46, and exhausting to one (1) stack, identified as S-50. Some portions of the conveying system are controlled by partial or total enclosure and exhaust to associated processes or inside the building.

~~(yyy) One (1) ball mill #2, with a maximum throughput of 0.15 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 38, and exhausting to one (1) stack, identified as S-38.~~

~~(zzz) One (1) ball mill #3, with a maximum throughput of 0.38 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 39, and exhausting to one (1) stack, identified as S-39.~~

~~(aaaa) One (1) paper fiber hammermill, with a maximum throughput of 0.065 tons per hour, with particulate matter emissions controlled by two (2) cyclones, identified as emissions point 45, and exhausting to one (1) stack, identified as S-49.~~

D.10.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) The particulate matter emissions from the #2 wallboard production facilities shall be limited as follows:

(1) PM emissions from the #2 board silo (S-32) shall not exceed 0.35 pounds per hour.

(2) PM emissions from the dry additive feeders (S-27) shall not exceed 0.58

~~(3) PM emissions from ball mill #2 (S-38) shall not exceed 0.05 pounds per hour.~~

~~(4) PM emissions from ball mill #3 (S-39) shall not exceed 0.06 pounds per hour.~~

~~(5) PM emissions from the paper mill (S-49) shall not exceed 0.70 pounds per hour.~~

(~~6~~**3**) PM emissions from the end saws (S-34) shall not exceed 0.93 pounds per hour.

Compliance with these limits make 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable. Compliance with these limitations shall also satisfy the requirements of 326 IAC 6-3.

D.10.8 Visible Emissions Notations

(a) Daily visible emission notations of the #2 wallboard additive stack exhausts (S-27, S-32, **and** S-34, ~~S-38, S-39 and S-49~~) shall be performed during normal daylight operations while in operation. Daily visible emission notations of the kiln exhaust (S-47) shall be performed during normal daylight operations while combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.

D.10.9 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses (Pts. 27, 32, **and** 34, ~~38~~, ~~39 and 45~~) used in conjunction with the #2 wallboard production facilities, at least once daily when the #2 wallboard production facilities are in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 0.5 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

Conclusion

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 101-18012-00001 and Significant Permit Modification 101-18106-00001.

Appendix A: Emission Calculations
Baghouse Operations

Company Name: **United States Gypsum Company**
Address City IN Zip: **State Road 650, Shoals, IN 47581**
SSM: **101-18012**
Plt ID: **101-00001**
Reviewer: **Craig J. Friederich**
Date: **################**

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	PM Emission Rate before Controls (lb/hr)	PM Emission Rate before Controls (tons/yr)	PM Emission Rate after Controls (lb/hr)	PM Emission Rate after Controls (tons/yr)
55	99.9%	0.0200	10500	1800.00	7884.0	1.8000	7.884

Methodology

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (sq. ft.) ((cub. ft./min.)/sq. ft.) (60 min/hr) (lb/7000 grains)
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

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